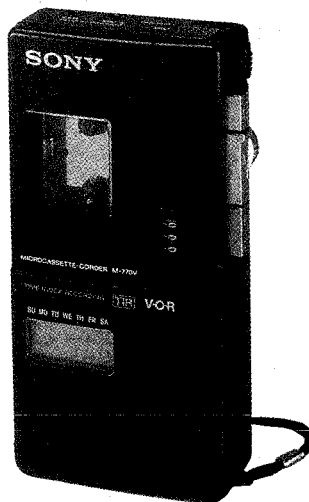


M-770V

SERVICE MANUAL



*US Model
Canadian Model
AEP Model
UK Model
E Model*

SPECIFICATIONS

Tape	MICROCASSETTE™ (normal position type)
Recording system	2-track 1-channel monaural
Speaker	Approx. 2.8 cm (1 1/8 inches) dia.
Tape speed	2.4 cm/s (15/16 ips), 1.2 cm/s (15/32 ips)
Frequency response	250–4,000 Hz (at 2.4 cm position)
Input	Microphone jack (minijack) (PLUG IN POWER) sensitivity 0.2 mV for 3 kilohms or lower impedance microphone
Output	Earphone jack (minijack) for 8–300 ohm earphone
Power output	150 mW (at 10% harmonic distortion)
Battery life	(recording hours)

Sony battery SUM-3 (NS)	Approx. 3.5
Sony alkaline battery AM3 (N)	Approx. 10

Power requirements	3 V DC, two R6 (size AA) batteries DC IN 3 V jack accepts; • Sony AC-D2M AC power adaptor (optional) available in AEP model for use on 220 V AC, 50 Hz available in UK model for use on 240 V AC, 50 Hz available in US and Canadian model for use on 120 V AC, 60 Hz available in E model for use on 120 V AC, 60 Hz or 220 V AC, 50 Hz • Sony DCC-70 car battery cord (optional) for use with 12 V car battery
Dimensions	Approx. 67.2 × 128.4 × 29.4 mm (w/h/d) (2 3/4 × 5 1/8 × 1 3/16 inches) incl. projecting parts and controls
Weight	Approx. 210 g (7.5 oz.) incl. batteries
Accessories supplied	Handstrap (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Model Name Using Similar Mechanism	M-550V
Tape Transport Mechanism Type	MZ-770V-14

FEATURES

- Compact size and easy operation
- TIR (Time Index Recording) function shows the date and time of recording in the display window during tape playback.
- VOR (Voice Operated Recording) system economizes on tapes, batteries and your time.
- 3-digit tape counter helps you to locate a desired portion on the tape.
- You can start recording directly from the playback mode. This function is convenient to correct a previously recorded portion.
- Automatic shut-off mechanism

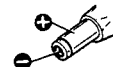
What is TIR (Time Index Recording) function?

The current date and time of your recording is automatically memorized on the tape during recording. When you play back the tape, the recorded date and time appear on the display window. You can easily identify the tape on which a conference or a lecture is recorded referring to your diary or memory.

What is VOR (Voice Operated Recording) system?

With this system, recording starts only when sound is picked up and stops automatically when sound is no longer detected.

Note: Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



MICROCASSETTE™-RECORDER
SONY®

SERVICING NOTE

FLEXIBLE CIRCUIT BOARD REPAIRING

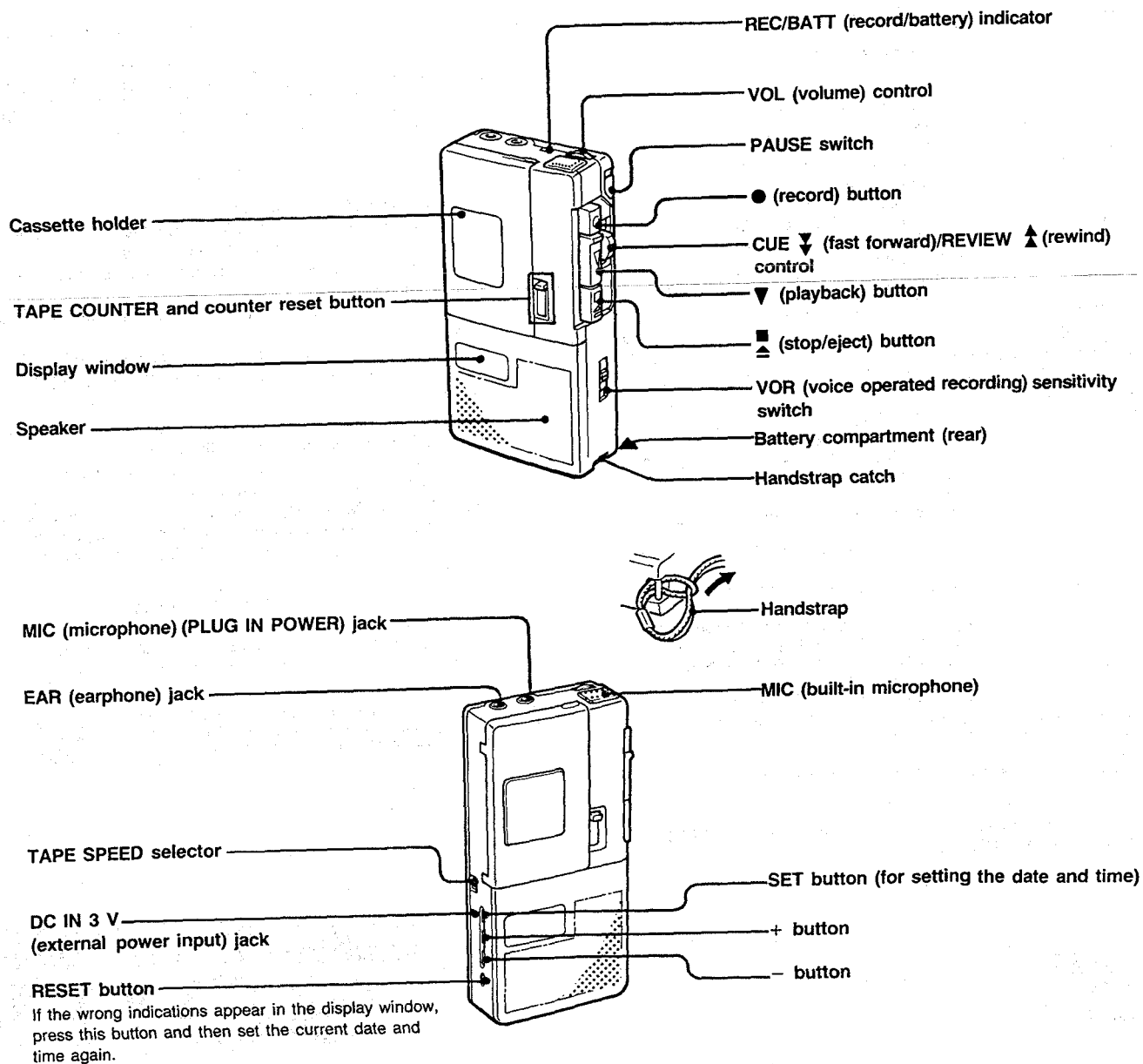
- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SECTION 1 GENERAL

1-1. Parts Identification



1-2. How to Set the Date/Time

First, stop the tape with the  button.

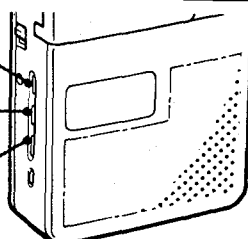
You cannot set the clock during tape playback or recording.

Example: To set the time/date to 1:05 p.m. (i.e. 13:05), December 27, 1990.

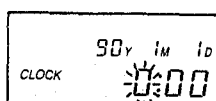
SET button

+ button

- button

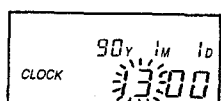


- 1** Keep the SET button pressed more than three seconds to make the hour digit blink.

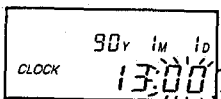


The clock indication of the initial mode is the 24-hour system.
(Choose the 12- or 24-hour indication in step 5.)

- 2** Set the hour by pressing the + or - button. When the + or - button is kept pressed, the digits advance rapidly.

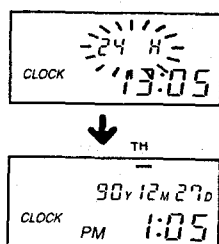


- 3** Press the SET button to make the minute digits blink.



- 4** Set the minute, month, day and year in the same way.
First adjust the blinking item with + or - button, and then press the SET button. (The day of the week is automatically set when the year, month and the day are registered.)

- 5** Choose the 12- or 24-hour indication by pressing the + or - button. (A blinking "12H" and "24H" alternately appears with each press of the + or - button.)
Then press the SET button. The date and time have been set completely.
The clock will now start.



To change the date/time

Keep the SET button pressed for more than three seconds. (The hour digits start blinking.) Press the SET button several times to make the digits blink which you want to change. After changing the number, press the SET button several times until the clock begins to operate.

12-hour indication

AM 12:00 = Midnight

PM 12:00 = Noon

24-hour indication

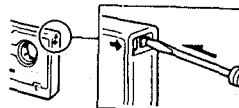
0:00 = Midnight

12:00 = Noon

Notes on Microcassette

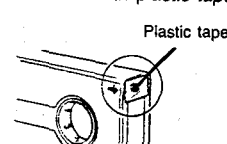
To protect cassettes from accidental erasure

Break out and remove the tab.



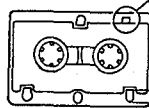
To reuse a cassette

Cover the slot with plastic tape.



This unit uses only standard Microcassettes. Non standard cassettes cannot be used because their "L" dimension (see illustration) is different.

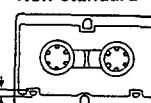
Standard



Only standard Microcassettes have a small indentation on side A.

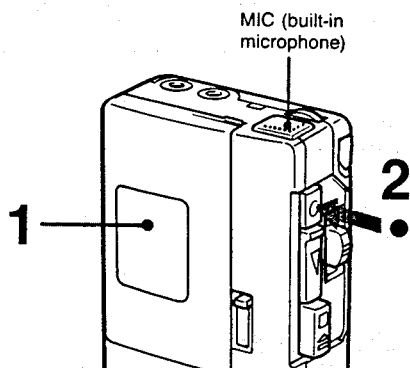
Approx. 5 mm

Non standard

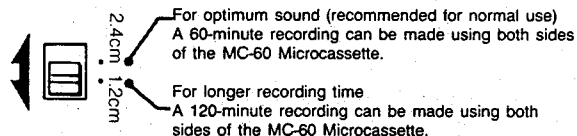


Approx. 2.5 mm

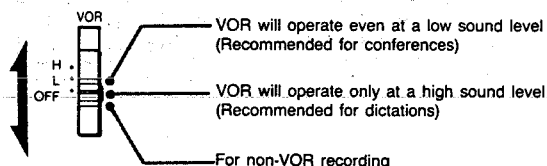
1-3. Recording with the Built-in Microphone



To select the desired tape speed



Recording only when sound is picked up (VOR system)



Recording with the TIR (Time Index Recording) function

Simply depress the ● button. The ▼ button is depressed automatically and recording starts. The date and time of the recording is automatically memorized on the tape when recording is continued for 10 seconds or more. (The display shows current date and time during recording. The mark “...” between the hour digits and the minute digits stop blinking during recording and playback.)

Note

The TIR function activates only when recording has been done for more than 10 seconds.

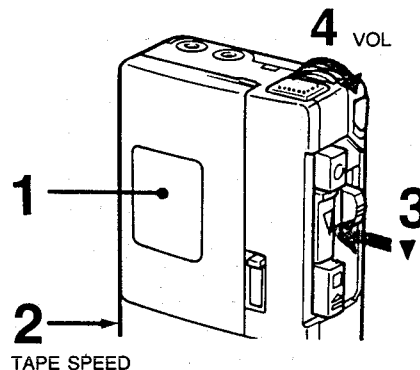
Quick review function

Simply push up the CUE ▼ /REVIEW ▲ control towards REVIEW ▲ while recording. When the control is released, playback begins for review of the recorded material. Recorded time display will remain on the window for approx. 20 seconds after the CUE ▼ /REVIEW ▲ control is used.

To listen to the recorded sound

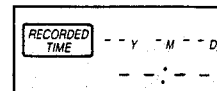
You can listen to the sound being recorded through the earphone (optional). (You can adjust the monitor volume with the VOL control.)

1-4. Playback



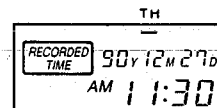
The same tape speed as that used for recording.

Depress the ▼ button. Playback starts.



The date and time of recording (RECORDED TIME) will appear on the display window after several seconds. However, the time after which the display comes on may vary according to the recording condition.

If you stop the tape by pressing the ■ / ▲ button, the display will go back to the current time indication after approx. 15 seconds.



To rapidly advance the tape, slide the CUE ▼ /REVIEW ▲ control to CUE ▼.

To rewind the tape, slide the CUE ▼ /REVIEW ▲ control to REVIEW ▲.

When the earphone is plugged in

The speaker is automatically disconnected.

To skip over or repeat a certain portion during playback

Keep the CUE ▼ /REVIEW ▲ control pushed down or up with the ▼ button depressed. When the control is released, playback begins.

To start recording directly from playback mode

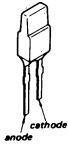
During playback, simply depress the ● button and the recorder will immediately change to the recording mode.

SECTION 3

DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUT

SLP159B



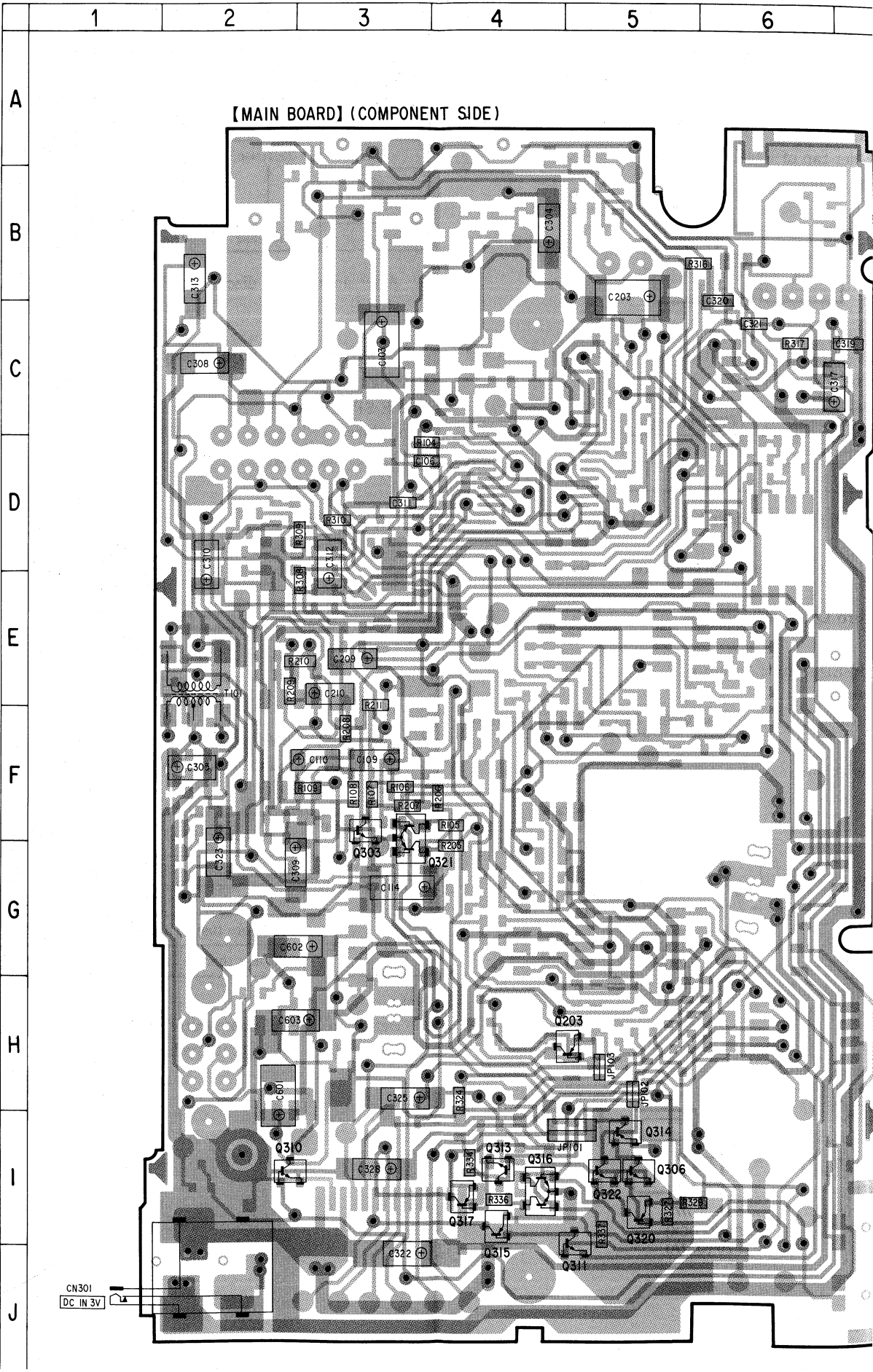
• Semiconductor Location

Ref. No.	Location
D201	H-9
D301	B-9
IC301	D-10
IC302	C-8
IC303	D-8
IC304	I-8
IC305	H-8
IC306	F-12
IC307	F-10
IC308	E-9
IC309	F-10
IC310	G-9
IC601	H-12
Q101	H-9
Q102	H-9
Q103	H-9
Q201	H-9
Q202	H-10
Q203	H-5
Q301	F-12
Q302	D-11
Q303	G-3
Q304	D-12
Q305	A-10
Q306	I-5
Q307	H-10
Q308	I-10
Q309	I-10
Q310	I-2
Q311	J-5
Q312	I-12
Q313	I-4
Q314	I-5
Q315	I-4
Q316	I-4
Q317	I-4
Q318	B-8
Q319	E-13
Q320	I-5
Q321	G-3
Q322	I-5

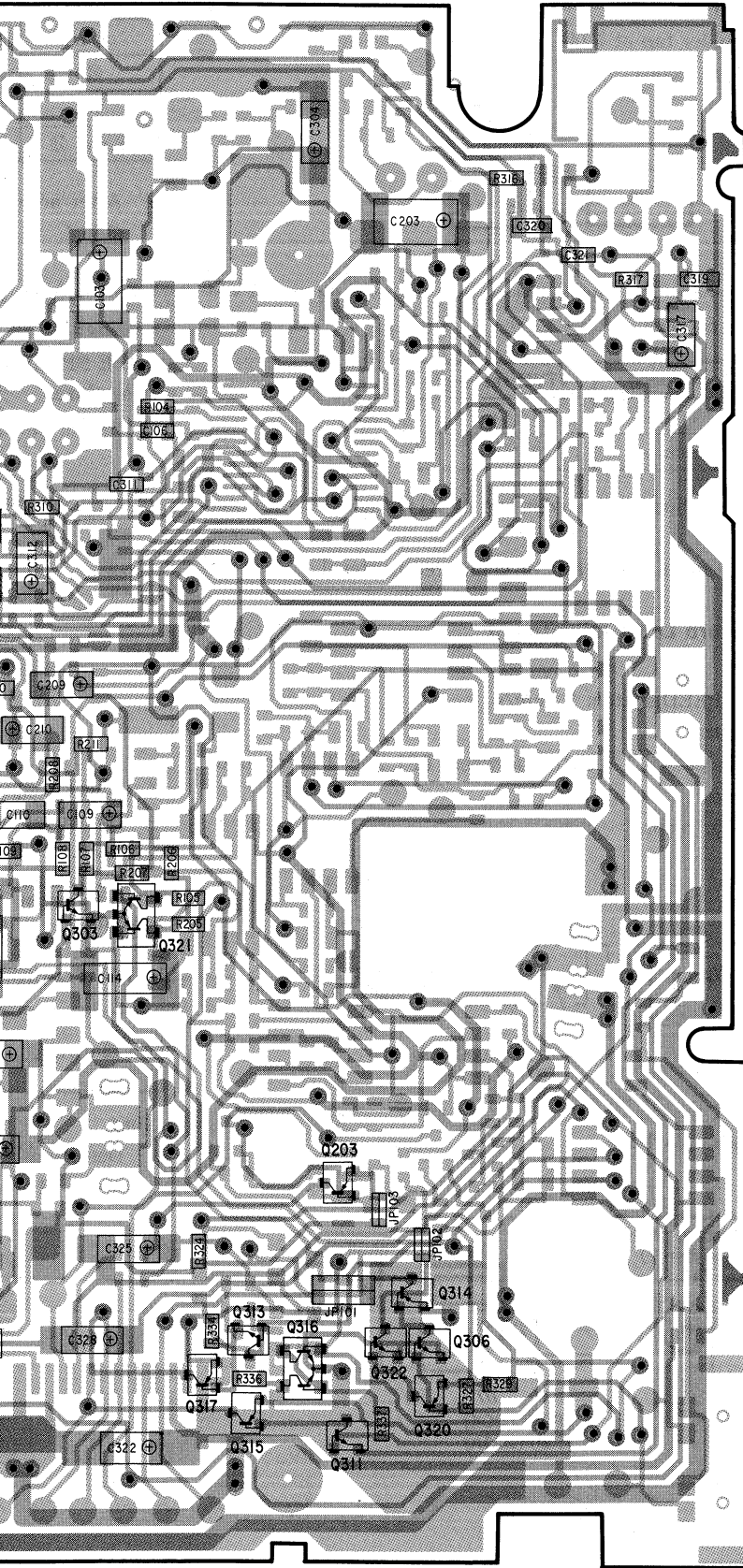
Note:

- : parts extracted from the conductor side.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.

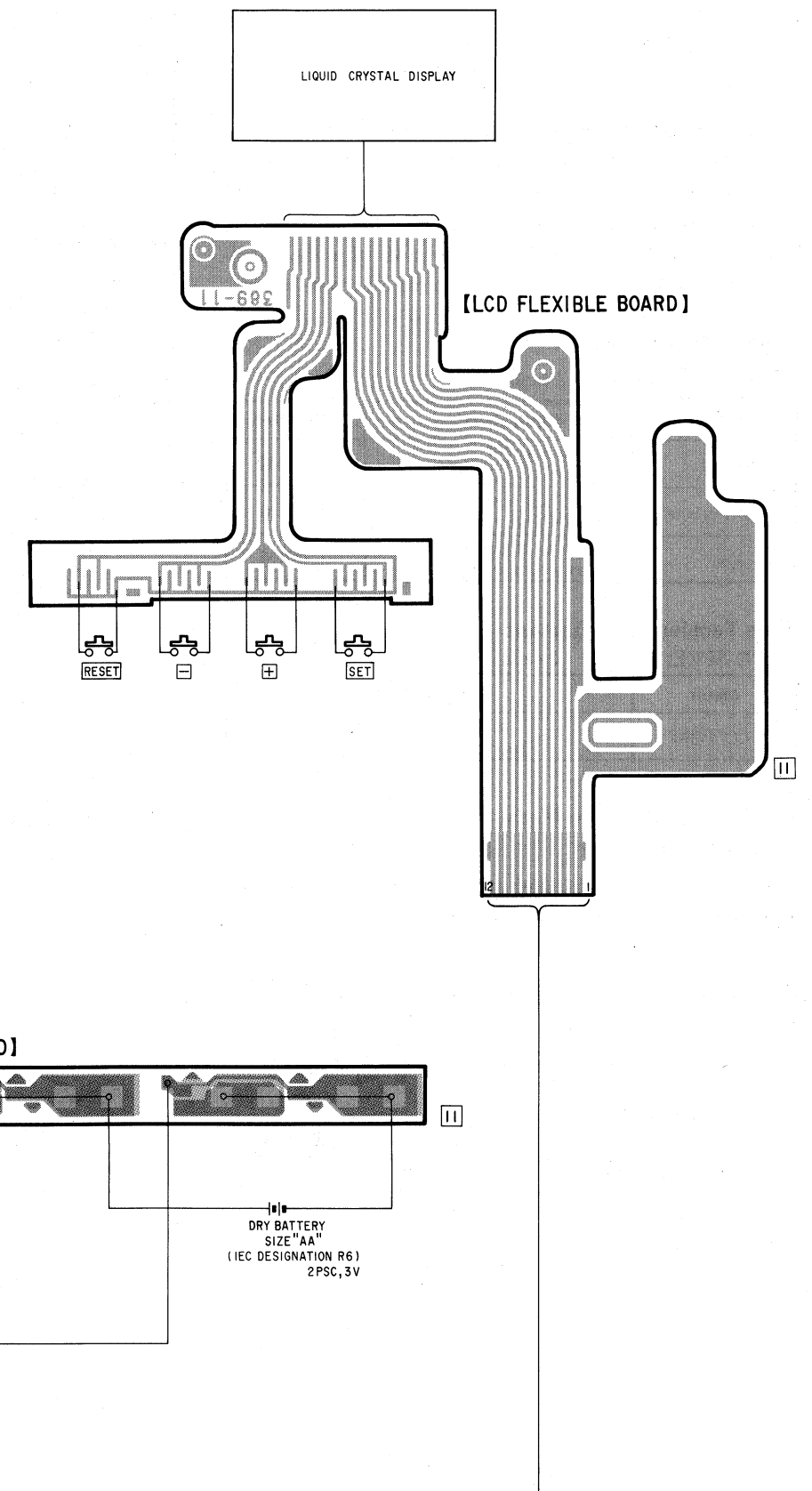
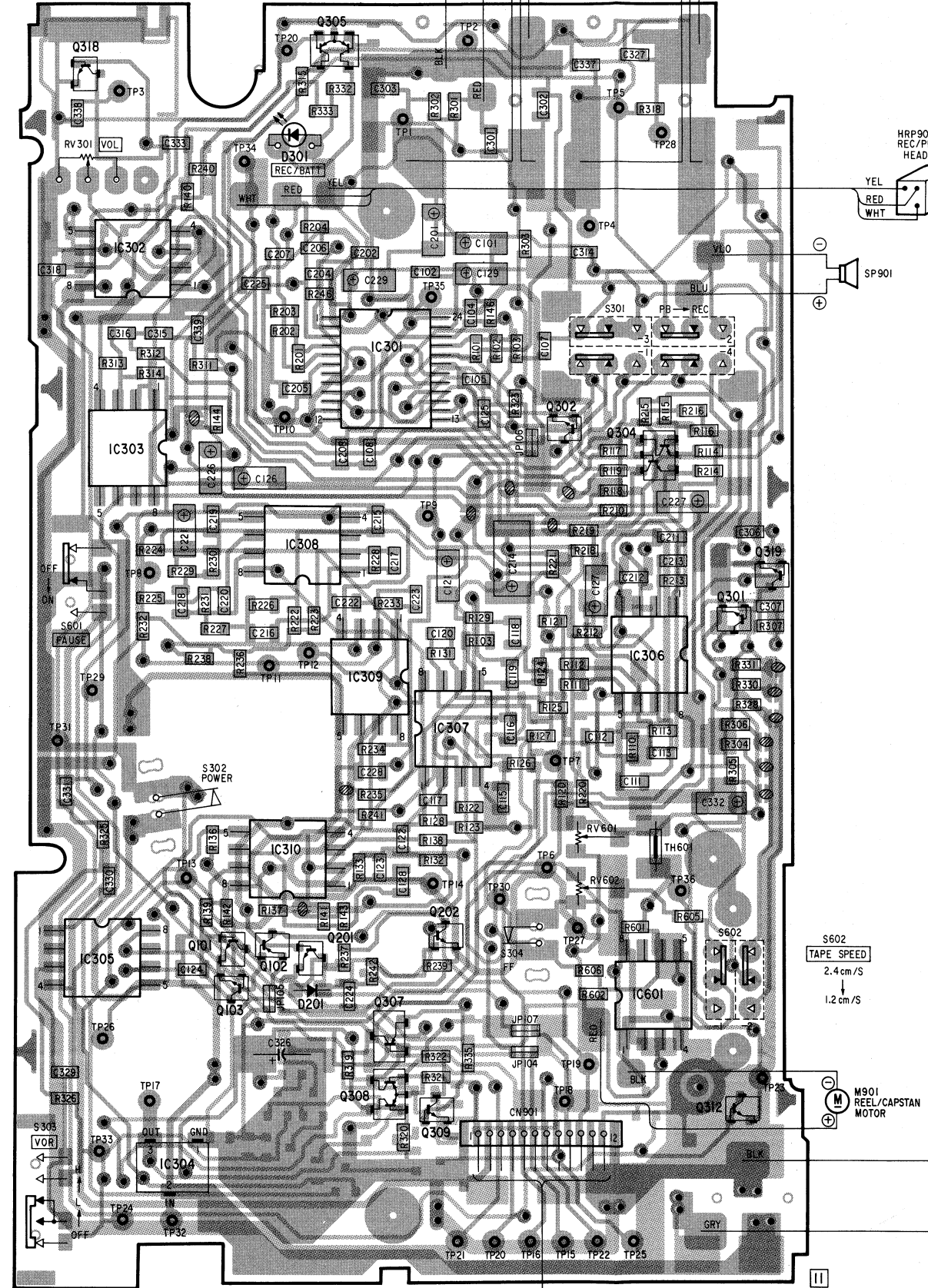
3-2. PRINTED WIRING BOARDS



[BOARD] (COMPONENT SIDE)



[MAIN BOARD] (CONDUCTOR SIDE)



SECTION 2
ADJUSTMENTS

2-1. MECHANICAL MEASUREMENT
PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:
record/playback head pinch roller
erase head rubber belts
capstan
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- The adjustments should be performed with the rated power supply voltage (2.5V DC) unless otherwise noted.

Torque Measurement

TAPE SPEED switch: 2.4 cm

Torque	Meter Reading	Torque Meter
Forward	5-13g·cm (0.07-0.18oz·inch)	CQ-103M
Fast Forward	5-13g·cm (0.07-0.18oz·inch)	CQ-201M
Rewind	more than 15g·cm (more than 0.21oz·inch)	CQ-201M

Tape Tension Measurement

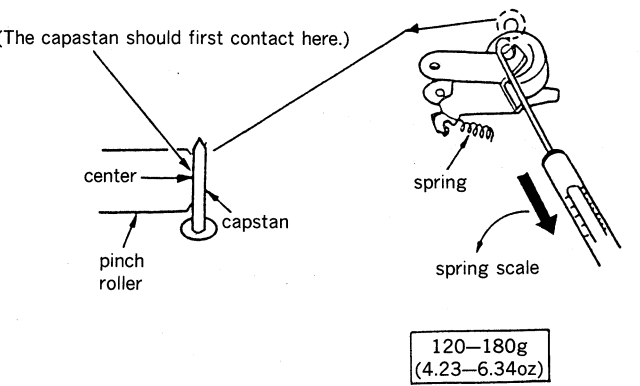
TAPE SPEED switch: 2.4 cm

Meter	Meter Reading
CQ-403M	more than 40g·cm (more than 0.56oz·inch)

Pinch Roller Pressure Measurement

—Playback Mode—

Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.



2-2. ELECTRICAL ADJUSTMENTS

Test Tape

Type	Signal	Use
S-2-A030	3kHz, -20dB	Record/playback Head Azimuth
WS-24	3kHz, -10dB	Tape Speed
TIR-2	32Hz, -34dB	TIR Playback Level
CS-50-2	Tape for Recording	TIR Record Level

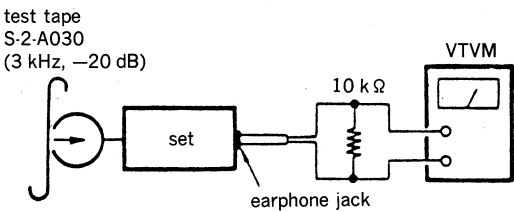
Record/playback Head Azimuth Adjustment

Setting:

VOLUME control: mechanical mid
TAPE SPEED switch: 2.4 cm/s
VOR switch: OFF

Procedure:

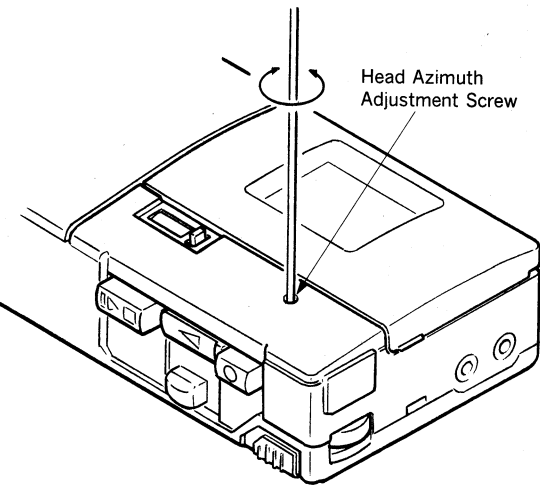
- Mode: playback



- Turn the adjustment screw to obtain the maximum reading on VTVM.

Note: Several peaks may appear, but take the maximum.

Adjustment Location:



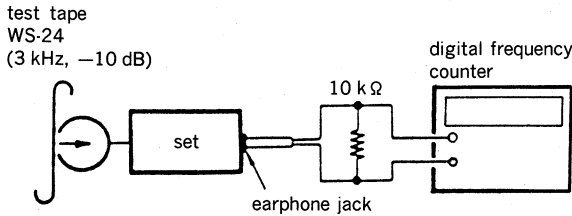
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid
VOR switch: OFF

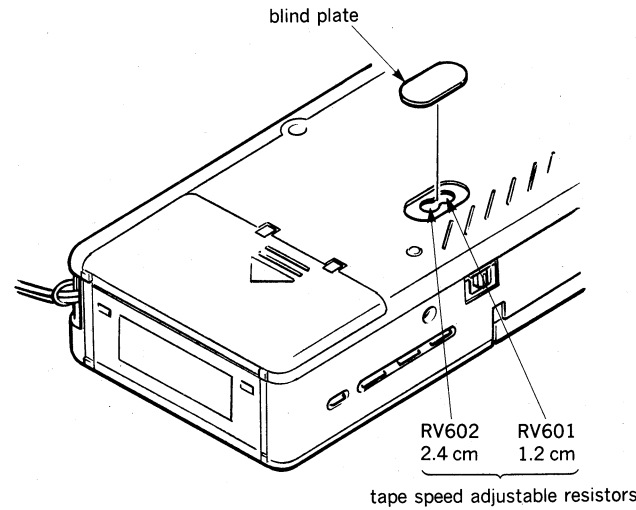
Procedure:

- Perform 2.4 cm/s speed adjustment before 1.2 cm/s speed adjustment.
- Mode: playback



Tape speed	Digital frequency counter
2.4 cm/s	2,985 - 3,015 Hz
1.2 cm/s	1,480 - 1,490 Hz

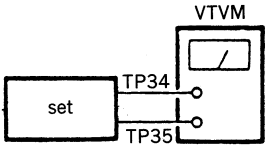
Adjustment Location:



Record Bias OSC Voltage Adjustment

Procedure:

- Connect 300Ω resistor between TP1 and TP2 on main board.
- Unsolder tap of R144.
- Mode: record



- Solder tap for adjustment so that the reading on VTVM is as follows.

Tape speed	VTVM reading
2.4 cm/s	50 ± 4 mV
1.2 cm/s	40 ± 4 mV

- After adjustment, solder tap of R144 unsoldered in step 2.
Disconnect 300Ω resistor connected in step 1.

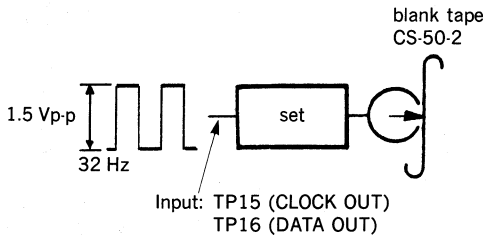
TIR Record Level Adjustment

Setting:

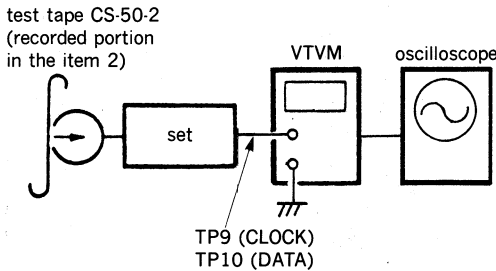
TAPE SPEED switch: 2.4 cm/s

Procedure:

- Connect 300Ω resistor between TP1 and TP2 on main board.
- Mode: record



- Mode: playback



- Solder tap for adjustment so that the reading on VTVM is as follows.

Bridge pattern	TP ou
open	
Ⓑ	
Ⓐ	
Ⓐ and Ⓑ	

- After adjustment, solder tap of R144 unsoldered in step 1.

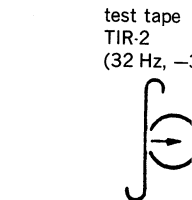
TIR Playback Level

Setting:

TAPE SPEED switch: 2.4 cm/s

Procedure:

- Mode: playback



- Check output
- Solder tap for adjustment so that the reading on VTVM is as follows.

Measurement point
TP14 (CLOCK)
TP12 (DATA)

Note:
Detection level adjustment. There f

4. Solder tap for adjustment so that each output of TP9 (CLOCK) and TP10 (DATA) is -43 ± 1.5 dB.

Bridge pattern	TP9 (CLOCK) output level	Bridge pattern	TP10 (DATA) output level
open	decrease	open	decrease
ⓑ	↕	ⓓ	↕
Ⓐ		ⓒ	
Ⓐ and ⓑ		ⓒ and ⓓ	
	increase		increase

5. After adjustment, disconnect 300Ω resistor connected in step 1.

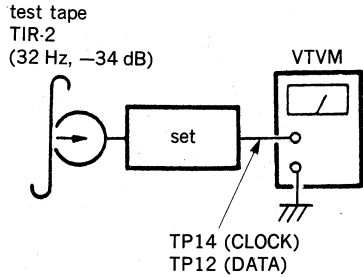
TIR Playback Level Adjustment

Setting:

TAPE SPEED switch: 2.4 cm/s

Procedure:

1. Mode: playback



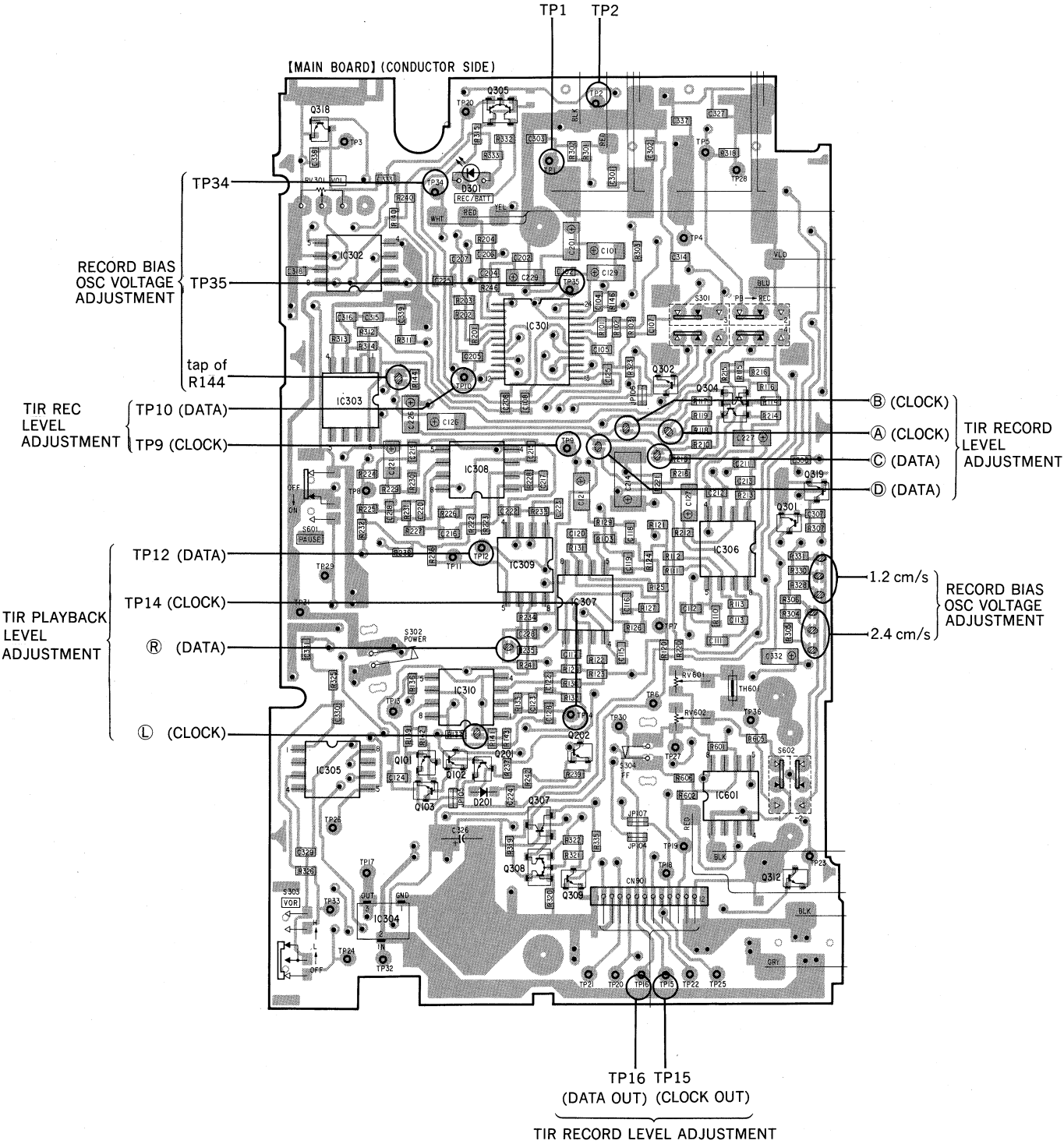
2. Check output level of TP14 (CLOCK) and TP12 (DATA).
3. Solder tap for adjustment as follows depending on output level.

Measurement point	output level	tap for adjustment
TP14 (CLOCK)	not more than -22 dB	Solder ① tap.
	not less than -23 dB	Unsolder ① tap.
TP12 (DATA)	not more than -22 dB	Solder Ⓜ tap.
	not less than -23 dB	Unsolder Ⓜ tap.

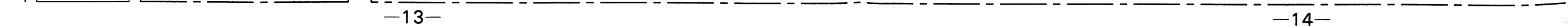
Note:

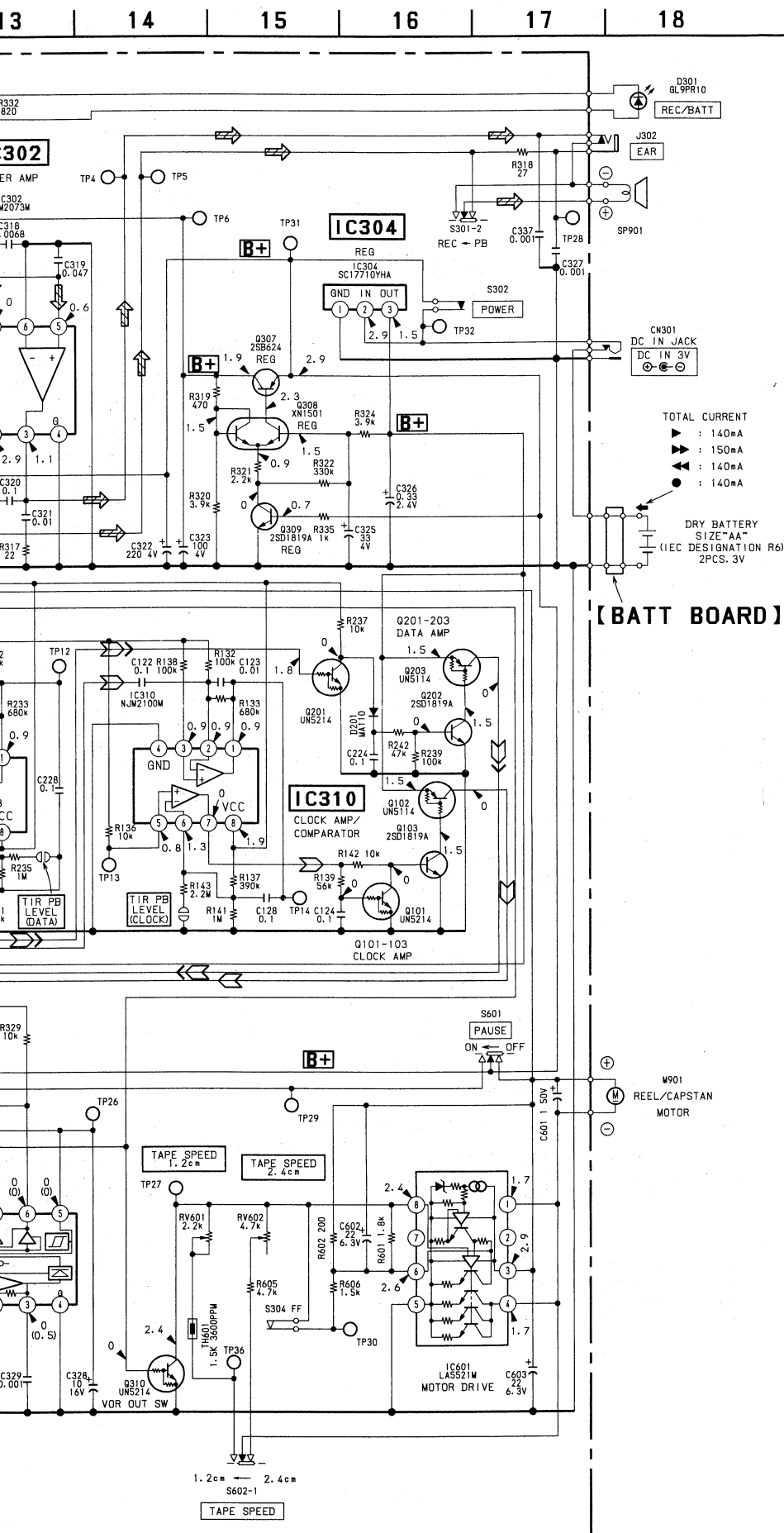
Detection level of comparator is changed by this adjustment. There for, output level is not changed.

Adjustment Location: main board



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----



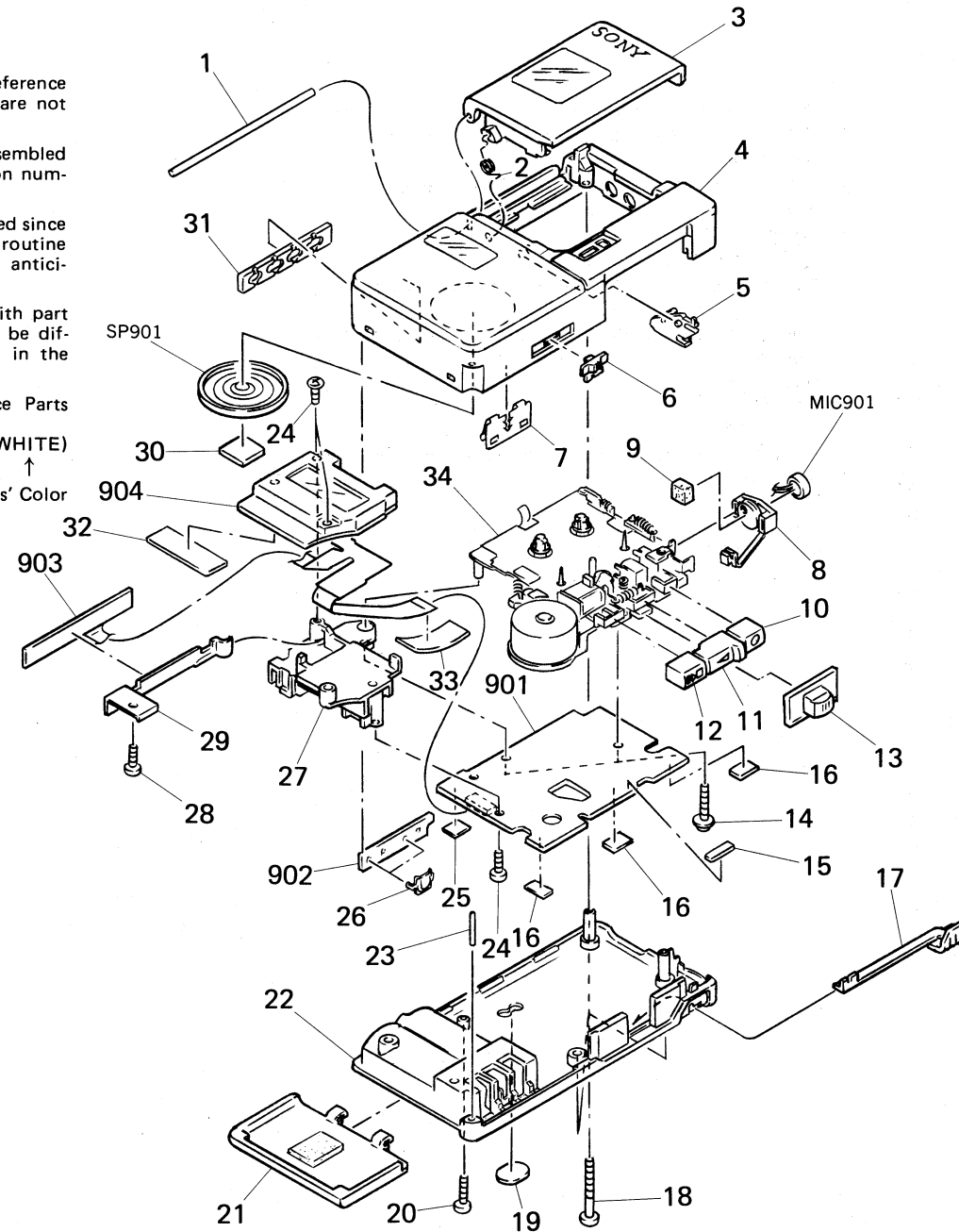
**Note:**

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- **B+** : B+ Line
- **□** : adjustment for repair.
- Power voltage is dc 3 V and fed with regulated dc power supply from the battery terminal.
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances. no mark:PB
- () : REC
- Marked * is not able to measure the voltage of its position.
- Signal path.

SECTION 4 EXPLODED VIEWS

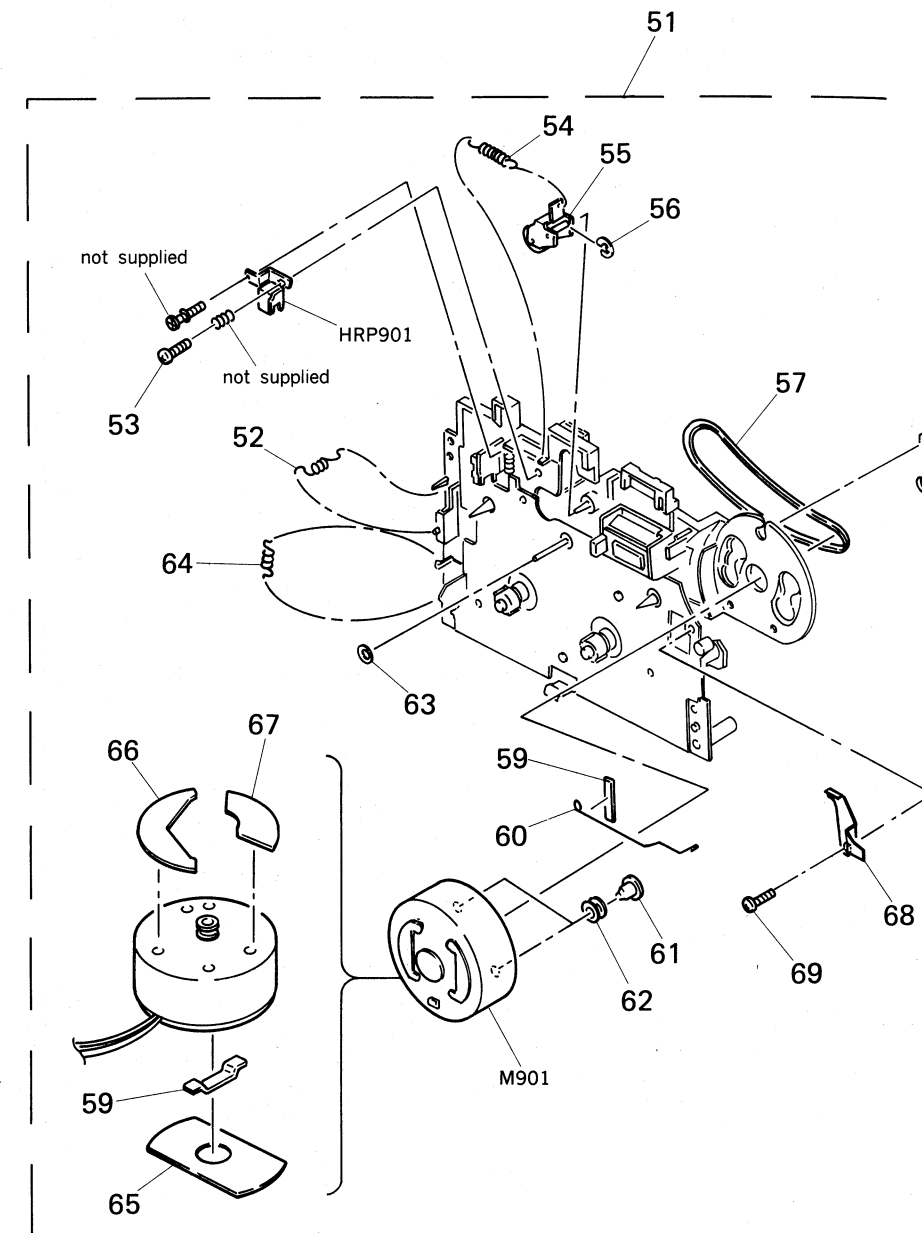
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts' Color



No.	Part No.	Description
1	*3-576-075-21	SHAFT, CASSETTE HOLDER
2	3-358-362-01	SPRING, TORSION
3	X-3342-150-1	LID ASSY, CASSETTE
4	X-3342-156-1	CABINET (FRONT) ASSY
5	3-358-342-01	LEVER (EJECT)
6	3-358-343-01	KNOB (VOR)
7	3-576-074-00	SPRING, BATTERY
8	3-343-953-01	HOLDER, MICROPHONE
9	3-358-370-01	CUSHION (MIC)
10	3-342-164-01	BUTTON (REC)
11	3-342-165-01	BUTTON (PLAY)
12	3-342-166-01	BUTTON (STOP)
13	3-342-168-01	BUTTON (F/R)
14	3-342-156-21	SCREW
15	*3-358-365-01	SPACER (P)
16	3-831-441-11	CUSHION (B)
17	3-358-341-01	KNOB (PAUSE)
18	3-357-509-01	SCREW (+1.7), TAPPING
19	3-342-155-11	PLATE, BLIND
20	3-358-367-01	SCREW (M1.7), TAPPING
21	X-3342-155-1	LID ASSY, BATTERY CASE

No.	Part No.	Description	Remarks
22	X-3342-154-1	CABINET (REAR) ASSY	
23	3-576-082-00	PIN, PARALLEL	
24	3-318-203-71	SCREW (B1.7X5), TAPPING	
25	3-831-441-XX	CUSHION, 10X7X0.3	
26	3-358-345-01	TERMINAL, BATTERY	
27	*3-358-340-01	HOLDER (LCD)	
28	3-318-203-71	SCREW (B1.7X5), TAPPING	
29	*3-358-339-01	BRACKET (LCD BUTTON)	
30	9-911-845-XX	CUSHION (A)	
31	3-352-494-01	BUTTON (LCD)	
32	3-358-360-01	SPACER	
33	*3-358-366-01	SPACER (B)	
34	A-3013-446-A	MECHANISM ASSY (MZ-770V-14)	52-69, HRP901, M901
901	A-3015-874-A	MOUNTED PCB, MAIN	
902	*1-634-254-11	PC BOARD, BATT	
903	1-634-389-11	PC BOARD, LCD FLEXIBLE	
904	1-808-987-11	DISPLAY PANEL, LIQUID CRYSTAL	
MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDENSER	
SP901	1-544-321-11	SPEAKER	



No.	Part No.	Description	Remarks
51	A-3013-446-A	MECHANISM ASSY (MZ-770V-14)	52-69, HRP901, M901
52	3-342-102-01	SPRING, TENSION	
53	3-318-203-31	SCREW (B1.7X8), TAPPING	
54	3-342-173-01	SPRING, TENSION	
55	X-3342-102-1	PINCH LEVER ASSY	
56	3-590-768-00	RING (A), E	
57	3-343-966-01	BELT	
58	3-358-324-01	SPRING, SWITCH ARM	
59	3-485-330-11	FELT	
60	3-358-348-01	SPRING (M GROUND)	
61	3-309-836-01	SHAFT, FITTING	
62	3-570-770-00	CUSHION (A),	
63	3-315-384-41	WASHER, STOPPI	
64	3-342-186-01	SPRING, TENSION	
65	3-342-050-11	RUBBER (A), V	
66	3-342-075-01	SPACER, MOTOR	
67	3-352-476-01	SHEET (MOTOR)	
68	3-358-350-01	SPRING (GROUND)	
69	7-627-850-67	SCREW, PRECIS	
HRP901	1-543-725-11	HEAD (RECORD/I	
M901	1-541-738-11	MOTOR	

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

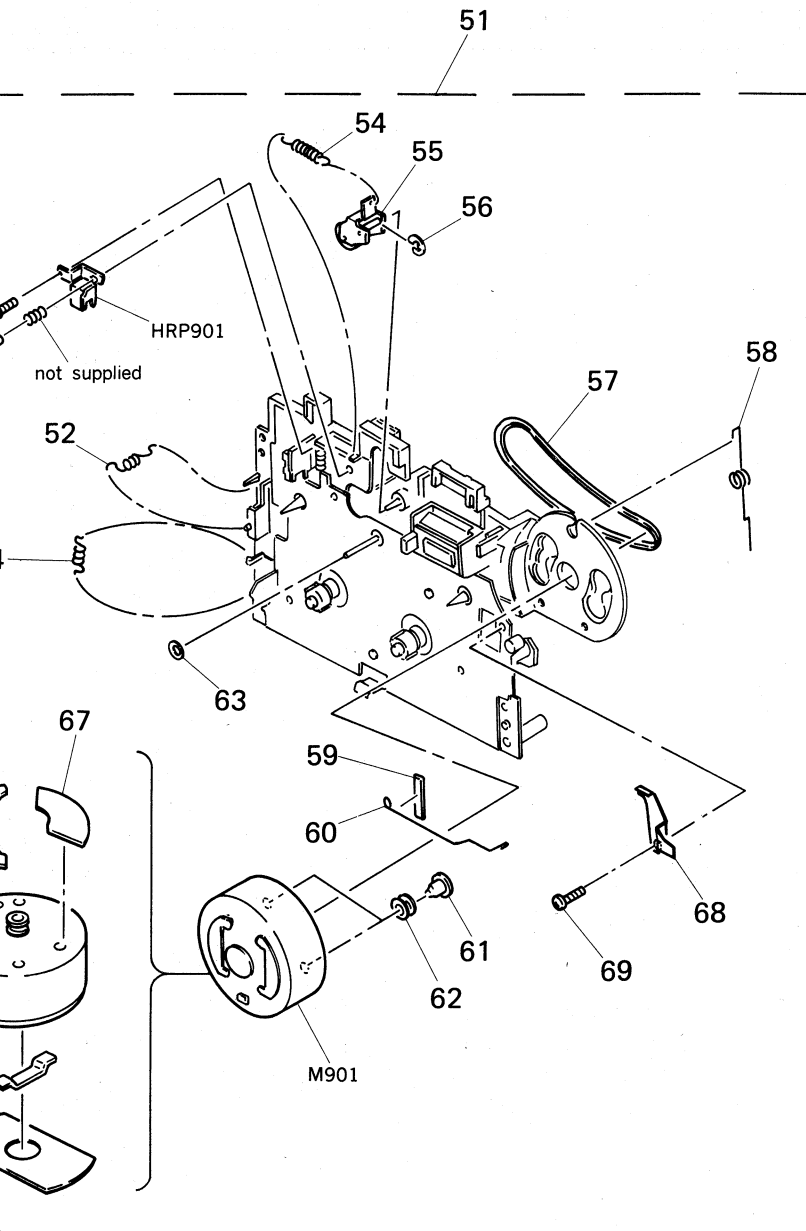
RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:UA....: μ A...., UPA....: μ PA...., UPC....: μ PC, UPD....: μ PD....

Remarks	No.	Part No.	Description
ASSY (MZ-770V-14)	61	3-309-836-01	SHAFT, FITTING, MOTOR
52-69, HRP901, M901	62	3-570-770-00	CUSHION (A), MOTOR
ENSION	63	3-315-384-41	WASHER, STOPPER
(7X8), TAPPING	64	3-342-186-01	SPRING, TENSION
ENSION	65	3-342-050-11	RUBBER (A), VIBRATION
ER ASSY	66	3-342-075-01	SPACER, MOTOR
E	67	3-352-476-01	SHEET (MOTOR)
ITCH ARM	68	3-358-350-01	SPRING (GROUND), LEAF
GROUND)	69	7-627-850-67	SCREW, PRECISION +P 1.4X4
	HRP901	1-543-725-11	HEAD (RECORD/PLAYBACK)
	M901	1-541-738-11	MOTOR

Ref.No.	Part No.	Description
901	A-3015-874-A	MOUNTED PCB, MAIN
902	*1-634-254-11	PC BOARD, BATT
903	1-634-389-11	PC BOARD, LCD FLEXIBLE
904	1-808-987-11	DISPLAY PANEL, LIQUID CRYSTAL
C101	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C102	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C103	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C104	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C105	1-163-810-00	CERAMIC CHIP 0.03MF 10% 25V
C106	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C107	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C108	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C109	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C110	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C111	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C112	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C113	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C114	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C115	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C116	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C117	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C118	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C119	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C120	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C121	1-135-145-11	TANTAL. CHIP 0.47MF 10% 25V
C122	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C123	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C124	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C125	1-163-034-00	CERAMIC CHIP 0.033MF 50V
C126	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C127	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C128	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C129	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C201	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C202	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C203	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C204	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C205	1-163-810-00	CERAMIC CHIP 0.03MF 10% 25V
C206	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C207	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C208	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C209	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C210	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C211	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C212	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C213	1-162-963-11	CERAMIC CHIP 680PF 10% 50V

Ref.No.	Part No.	Description
C214	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C215	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C216	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C217	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C218	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C219	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C220	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C221	1-135-145-11	TANTAL. CHIP 0.47MF 10% 25V
C222	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C223	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C224	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C225	1-163-034-00	CERAMIC CHIP 0.033MF 50V
C226	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C227	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C228	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C229	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C301	1-163-833-00	CERAMIC CHIP 0.068MF 10% 25V
C302	1-163-035-00	CERAMIC CHIP 0.047MF 50V
C303	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C304	1-126-607-11	ELECT 47MF 20% 4V
C305	1-135-202-21	TANTAL. CHIP 22MF 20% 4V
C306	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C307	1-162-969-11	CERAMIC CHIP 0.0068MF 10% 25V
C308	1-126-607-11	ELECT 47MF 20% 4V
C309	1-126-606-11	ELECT 33MF 20% 4V
C310	1-126-591-11	ELECT CHIP 10MF 20% 6.3V
C311	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C312	1-126-591-11	ELECT CHIP 10MF 20% 6.3V
C313	1-126-605-11	ELECT 22MF 20% 6.3V
C314	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C315	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C316	1-164-172-11	CERAMIC CHIP 0.0056MF 5% 25V
C317	1-135-151-21	TANTAL. CHIP 4.7MF 20% 4V
C318	1-162-969-11	CERAMIC CHIP 0.0068MF 10% 25V
C319	1-163-035-00	CERAMIC CHIP 0.047MF 50V
C320	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C321	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C322	1-126-246-11	ELECT 220MF 20% 4V
C323	1-126-209-11	ELECT CHIP 100MF 20% 4V
C325	1-126-606-11	ELECT 33MF 20% 4V
C326	1-125-607-11	ELECT (BLOCK) 0.33F 2.4V
C327	1-162-964-11	CERAMIC CHIP 0.001MF 10% 50V
C328	1-126-604-11	ELECT 10MF 20% 16V
C329	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C330	1-163-035-00	CERAMIC CHIP 0.047MF 50V

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

MF: μ F, PF: μ F.

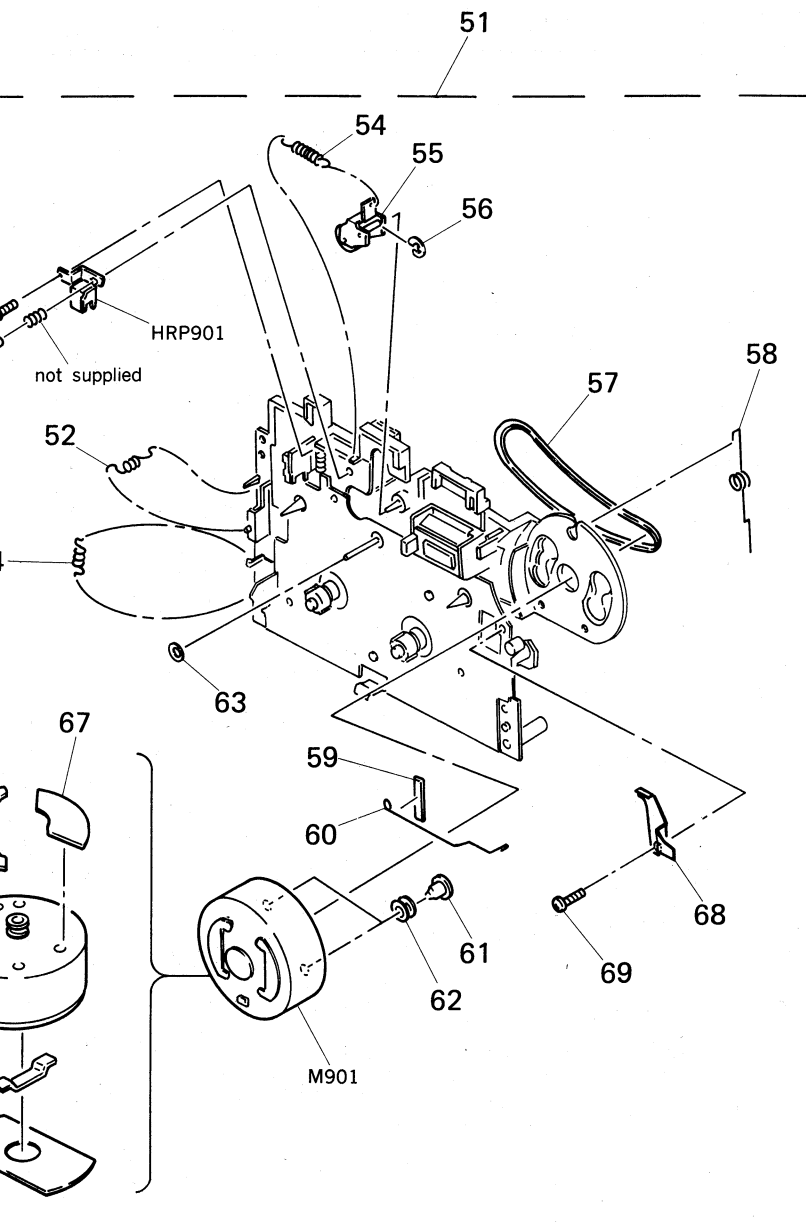
RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:UA....: μ A...., UPA....: μ PA...., UPC....: μ PC, UPD....: μ PD....

Remarks	No.	Part No.	Description
ASSY (MZ-770V-14)	61	3-309-836-01	SHAFT, FITTING, MOTOR
52-69, HRP901, M901	62	3-570-770-00	CUSHION (A), MOTOR
ENSION	63	3-315-384-41	WASHER, STOPPER
(7X8), TAPPING	64	3-342-186-01	SPRING, TENSION
ENSION	65	3-342-050-11	RUBBER (A), VIBRATION
ER ASSY	66	3-342-075-01	SPACER, MOTOR
E	67	3-352-476-01	SHEET (MOTOR)
ITCH ARM	68	3-358-350-01	SPRING (GROUND), LEAF
(GROUND)	69	7-627-850-67	SCREW, PRECISION +P 1.4X4
	HRP901	1-543-725-11	HEAD (RECORD/PLAYBACK)
	M901	1-541-738-11	MOTOR

Ref.No.	Part No.	Description
901	A-3015-874-A	MOUNTED PCB, MAIN
902	*1-634-254-11	PC BOARD, BATT
903	1-634-389-11	PC BOARD, LCD FLEXIBLE
904	1-808-987-11	DISPLAY PANEL, LIQUID CRYSTAL
C101	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C102	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C103	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C104	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C105	1-163-810-00	CERAMIC CHIP 0.03MF 10% 25V
C106	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C107	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C108	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C109	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C110	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C111	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C112	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C113	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C114	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C115	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C116	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C117	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C118	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C119	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C120	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C121	1-135-145-11	TANTAL. CHIP 0.47MF 10% 25V
C122	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C123	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C124	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C125	1-163-034-00	CERAMIC CHIP 0.033MF 50V
C126	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C127	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C128	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C129	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C201	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C202	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C203	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C204	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C205	1-163-810-00	CERAMIC CHIP 0.03MF 10% 25V
C206	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C207	1-162-995-11	CERAMIC CHIP 0.022MF 50V
C208	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C209	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C210	1-135-192-21	TANTAL. CHIP 0.47MF 10% 20V
C211	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C212	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C213	1-162-963-11	CERAMIC CHIP 680PF 10% 50V

Ref.No.	Part No.	Description
C214	1-135-163-21	TANTAL. CHIP 47MF 10% 4V
C215	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C216	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C217	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C218	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C219	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C220	1-162-963-11	CERAMIC CHIP 680PF 10% 50V
C221	1-135-145-11	TANTAL. CHIP 0.47MF 10% 25V
C222	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C223	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C224	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C225	1-163-034-00	CERAMIC CHIP 0.033MF 50V
C226	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C227	1-135-180-21	TANTAL. CHIP 3.3MF 20% 4V
C228	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V
C229	1-135-072-21	TANTAL. CHIP 0.22MF 20% 35V
C301	1-163-833-00	CERAMIC CHIP 0.068MF 10% 25V
C302	1-163-035-00	CERAMIC CHIP 0.047MF 50V
C303	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C304	1-126-607-11	ELECT 47MF 20% 4V
C305	1-135-202-21	TANTAL. CHIP 22MF 20% 4V
C306	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C307	1-162-969-11	CERAMIC CHIP 0.0068MF 10% 25V
C308	1-126-607-11	ELECT 47MF 20% 4V
C309	1-126-606-11	ELECT 33MF 20% 4V
C310	1-126-591-11	ELECT CHIP 10MF 20% 6.3V
C311	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C312	1-126-591-11	ELECT CHIP 10MF 20% 6.3V
C313	1-126-605-11	ELECT 22MF 20% 6.3V
C314	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C315	1-162-968-11	CERAMIC CHIP 0.0047MF 10% 50V
C316	1-164-172-11	CERAMIC CHIP 0.0056MF 5% 25V
C317	1-135-151-21	TANTAL. CHIP 4.7MF 20% 4V
C318	1-162-969-11	CERAMIC CHIP 0.0068MF 10% 25V
C319	1-163-035-00	CERAMIC CHIP 0.047MF 50V
C320	1-163-038-00	CERAMIC CHIP 0.1MF 25V
C321	1-162-970-11	CERAMIC CHIP 0.01MF 10% 25V
C322	1-126-246-11	ELECT 220MF 20% 4V
C323	1-126-209-11	ELECT CHIP 100MF 20% 4V
C325	1-126-606-11	ELECT 33MF 20% 4V
C326	1-125-607-11	ELECT (BLOCK) 0.33F 2.4V
C327	1-162-964-11	CERAMIC CHIP 0.001MF 10% 50V
C328	1-126-604-11	ELECT 10MF 20% 16V
C329	1-162-971-11	CERAMIC CHIP 0.001MF 50V
C330	1-163-035-00	CERAMIC CHIP 0.047MF 50V

Ref.No.	Part No.	Description			
C331	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C332	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V	
C333	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C337	1-162-971-11	CERAMIC CHIP 0.001MF		50V	
C338	1-162-971-11	CERAMIC CHIP 0.001MF		50V	
C339	1-162-962-11	CERAMIC CHIP 470PF	10%	50V	
C601	1-126-594-11	ELECT CHIP 1MF	20%	50V	
C602	1-126-605-11	ELECT 22MF	20%	6.3V	
C603	1-126-605-11	ELECT 22MF	20%	6.3V	
CN301	1-569-369-11	JACK, EXTERNAL POWER (DC IN)			
CN901	1-569-528-11	HOUSING, CONNECTOR 12P			
D201	8-719-404-46	DIODE M110			
D301	8-719-915-54	LED SLP159B (REC/BATT)			
HE901		NOT SUPPLIED (included in MECHANISM ASSY)			
HRP901	1-543-725-11	HEAD (RECORD/PLAYBACK)			
IC301	8-752-036-27	IC CXA1278N			
IC302	8-759-701-02	IC NJM2073M			
IC303	8-759-710-55	IC NJM2100M			
IC304	8-759-994-35	IC SCI7710YHA			
IC305	8-759-701-51	IC NJM2072M			
IC306	8-759-710-55	IC NJM2100M			
IC307	8-759-710-55	IC NJM2100M			
IC308	8-759-710-55	IC NJM2100M			
IC309	8-759-710-55	IC NJM2100M			
IC310	8-759-710-55	IC NJM2100M			
IC601	8-759-804-43	IC LA5521M			
J301	1-569-215-21	JACK (MIC)			
J302	1-569-215-21	JACK (EAR)			
JP101	1-216-296-00	METAL GLAZE 0	5%	1/8W	
JP102	1-216-864-11	METAL GLAZE 0	5%	1/16W	
JP103	1-216-864-11	METAL GLAZE 0	5%	1/16W	
JP104	1-216-864-11	METAL GLAZE 0	5%	1/16W	
JP105	1-216-864-11	METAL GLAZE 0	5%	1/16W	
JP106	1-216-864-11	METAL GLAZE 0	5%	1/16W	
JP107	1-216-864-11	METAL GLAZE 0	5%	1/16W	
M901	1-541-738-11	MOTOR			
MIC901	1-542-136-11	MICROPHONE, ELECTRET CONDEDSER			
Q101	8-729-421-26	TRANSISTOR UN5216			
Q102	8-729-402-96	TRANSISTOR UN5114			
Q103	8-729-420-27	TRANSISTOR 2SD1819A-QRS			
Q201	8-729-421-26	TRANSISTOR UN5216			
Q202	8-729-420-27	TRANSISTOR 2SD1819A-QRS			
Q203	8-729-402-96	TRANSISTOR UN5114			
Q301	8-729-420-27	TRANSISTOR 2SD1819A-QRS			
Q302	8-729-421-26	TRANSISTOR UN5216			
Q303	8-729-421-26	TRANSISTOR UN5216			
Q304	8-729-402-19	TRANSISTOR XN6501			
Q305	8-729-403-17	TRANSISTOR XN1215			
Q306	8-729-421-26	TRANSISTOR UN5216			
Q307	8-729-162-44	TRANSISTOR 2SB624-BV4			
Q308	8-729-421-23	TRANSISTOR XN1216			
Q309	8-729-420-27	TRANSISTOR 2SD1819A-QRS			
Q310	8-729-421-26	TRANSISTOR UN5216			
Q311	8-729-420-50	TRANSISTOR UN5215			
Q312	8-729-420-27	TRANSISTOR 2SD1819A-QRS			
Q313	8-729-420-27	TRANSISTOR 2SD1819A-QRS			

Ref.No.	Part No.	Description			
Q314	8-729-420-53	TRANSISTOR UN5115			
Q315	8-729-402-96	TRANSISTOR UN5114			
Q316	8-729-420-16	TRANSISTOR XN1214			
Q317	8-729-420-24	TRANSISTOR 2SB1218A-QRS			
Q318	8-729-421-26	TRANSISTOR UN5216			
Q319	8-729-421-26	TRANSISTOR UN5216			
Q320	8-729-402-96	TRANSISTOR UN5114			
Q321	8-729-403-17	TRANSISTOR XN1215			
Q322	8-729-421-26	TRANSISTOR UN5216			
R101	1-216-817-11	METAL GLAZE 470	5%	1/16W	
R102	1-216-829-11	METAL GLAZE 4.7K	5%	1/16W	
R103	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R104	1-216-829-11	METAL GLAZE 4.7K	5%	1/16W	
R105	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R106	1-216-841-11	METAL GLAZE 47K	5%	1/16W	
R107	1-216-841-11	METAL GLAZE 47K	5%	1/16W	
R108	1-216-830-11	METAL GLAZE 5.6K	5%	1/16W	
R109	1-216-835-11	METAL GLAZE 15K	5%	1/16W	
R110	1-216-104-00	METAL GLAZE 200K	5%	1/10W	
R111	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R112	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R113	1-216-857-11	METAL GLAZE 1M	5%	1/16W	
R114	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R115	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R116	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R117	1-216-832-11	METAL GLAZE 8.2K	5%	1/16W	
R118	1-216-835-11	METAL GLAZE 15K	5%	1/16W	
R119	1-216-839-11	METAL GLAZE 33K	5%	1/16W	
R120	1-216-834-11	METAL GLAZE 12K	5%	1/16W	
R121	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R122	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R123	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R124	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R125	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R126	1-216-104-00	METAL GLAZE 200K	5%	1/10W	
R127	1-216-835-11	METAL GLAZE 15K	5%	1/16W	
R128	1-216-857-11	METAL GLAZE 1M	5%	1/16W	
R129	1-216-835-11	METAL GLAZE 15K	5%	1/16W	
R130	1-216-104-00	METAL GLAZE 200K	5%	1/10W	
R131	1-216-857-11	METAL GLAZE 1M	5%	1/16W	
R132	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R133	1-216-855-11	METAL GLAZE 680K	5%	1/16W	
R136	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R137	1-216-852-11	METAL GLAZE 390K	5%	1/16W	
R138	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R139	1-216-842-11	METAL GLAZE 56K	5%	1/16W	
R140	1-216-841-11	METAL GLAZE 47K	5%	1/16W	
R141	1-216-857-11	METAL GLAZE 1M	5%	1/16W	
R142	1-216-833-11	METAL GLAZE 10K	5%	1/16W	
R143	1-216-861-11	METAL GLAZE 2.2M	5%	1/16W	
R144	1-216-809-11	METAL GLAZE 100	5%	1/16W	
R146	1-216-830-11	METAL GLAZE 5.6K	5%	1/16W	
R201	1-216-817-11	METAL GLAZE 470	5%	1/16W	
R202	1-216-829-11	METAL GLAZE 4.7K	5%	1/16W	
R203	1-216-845-11	METAL GLAZE 100K	5%	1/16W	
R204	1-216-829-11	METAL GLAZE 4.7K	5%	1/16W	
R205	1-216-833-11	METAL GLAZE 10K	5%	1/16W	

Ref.No.	Part No.	Description			
R206	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R207	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R208	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R209	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R210	1-216-104-00	METAL GLAZE	200K	5%	1/10W
R211	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R212	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R213	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R214	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R215	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R216	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R217	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R218	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R219	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R220	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R221	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R222	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R223	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R224	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R225	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R226	1-216-104-00	METAL GLAZE	200K	5%	1/10W
R227	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R228	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R229	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R230	1-216-104-00	METAL GLAZE	200K	5%	1/10W
R231	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R232	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R233	1-216-855-11	METAL GLAZE	680K	5%	1/16W
R234	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R235	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R236	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R237	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R238	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R239	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R240	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R241	1-216-850-11	METAL GLAZE	270K	5%	1/16W
R242	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R246	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R301	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R302	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R303	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R304	1-216-805-11	METAL GLAZE	47	5%	1/16W
R305	1-216-806-11	METAL GLAZE	56	5%	1/16W
R306	1-216-809-11	METAL GLAZE	100	5%	1/16W
R307	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R308	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R309	1-216-859-11	METAL GLAZE	1.5M	5%	1/16W
R310	1-216-817-11	METAL GLAZE	470	5%	1/16W
R311	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R312	1-216-844-11	METAL GLAZE	82K	5%	1/16W
R313	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R314	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R315	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R316	1-216-797-11	METAL GLAZE	10	5%	1/16W
R317	1-216-801-11	METAL GLAZE	22	5%	1/16W
R318	1-216-802-11	METAL GLAZE	27	5%	1/16W
R319	1-216-817-11	METAL GLAZE	470	5%	1/16W

Ref.No.	Part No.	Description			
R320	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R321	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R322	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R323	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R324	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R325	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R326	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R327	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R328	1-216-809-11	METAL GLAZE	100	5%	1/16W
R329	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R330	1-218-285-11	METAL GLAZE	75	5%	1/16W
R331	1-216-806-11	METAL GLAZE	56	5%	1/16W
R332	1-216-820-11	METAL GLAZE	820	5%	1/16W
R333	1-216-812-11	METAL GLAZE	180	5%	1/16W
R334	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R335	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R336	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R337	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R601	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W
R602	1-218-287-11	METAL GLAZE	200	5%	1/16W
R605	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R606	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
RV301	1-237-731-21	RES, VAR, CARBON 10K (VOL)			
RV601	1-238-662-11	RES, ADJ, CERMET 2.2K			
RV602	1-238-663-11	RES, ADJ, CERMER 4.7K			
S301	1-572-246-11	SWITCH, SLIDE (REC/PB)			
S302	1-571-621-21	SWITCH, LEAF (POWER)			
S303	1-571-506-41	SWITCH, SLIDE (VOR)			
S304	1-571-986-11	SWITCH, LEAF (FF)			
S601	1-571-275-31	SWITCH, SLIDE (PAUSE)			
S602	1-571-478-11	SWITCH, SLIDE (TAPE SPEED)			
SP901	1-544-321-11	SPEAKER			
T101	1-433-341-11	TRANSFORMER, BIAS OSCILLATION			
TH601	1-808-956-11	THERMISTOR, POSITIVE (1.5K)			

ACCESSORY & PACKING MATERIAL

*3-338-735-01	BAG, PROTECTION
*3-358-327-01	CUSHION
*3-358-329-01	INDIVIDUAL CARTON
3-751-765-11	(Canadian,AEP,UK,E)...MANUAL, INSTRUCTION (ENGLISH/FRENCH)
3-751-765-21	(US).....MANUAL, INSTRUCTION (ENGLISH)
3-751-765-41	(AEP).....MANUAL, INSTRUCTION (GERMAN/DUTCH)
3-751-765-51	(AEP,E)...MANUAL, INSTRUCTION (SPANISH/PORTUGUESE)
3-751-765-61	(AEP).....MANUAL, INSTRUCTION (SWEDISH/ITALIAN)
X-3338-703-1	STRAP ASSY